

HCal Tile Testing Status

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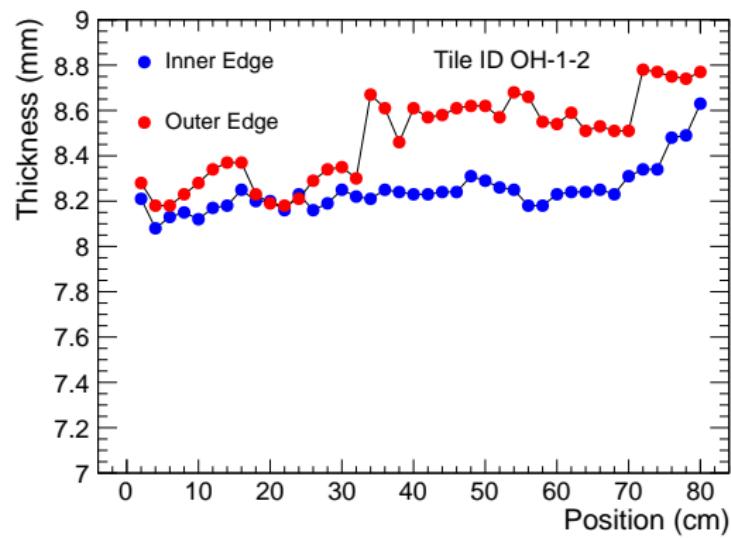
University of Colorado, Boulder

April 5th, 2016

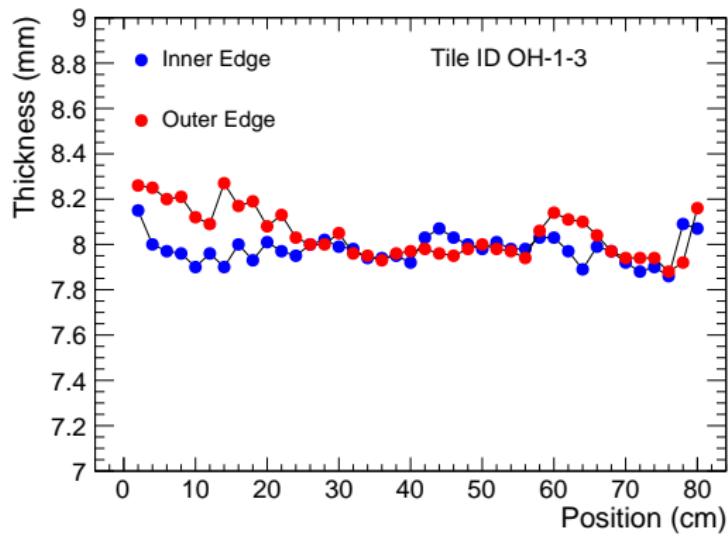


University of Colorado
Boulder

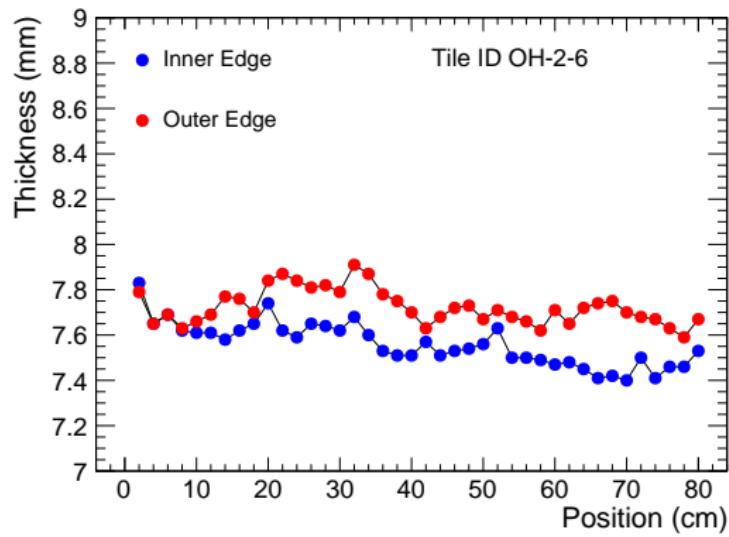
Inventory and tile thickness



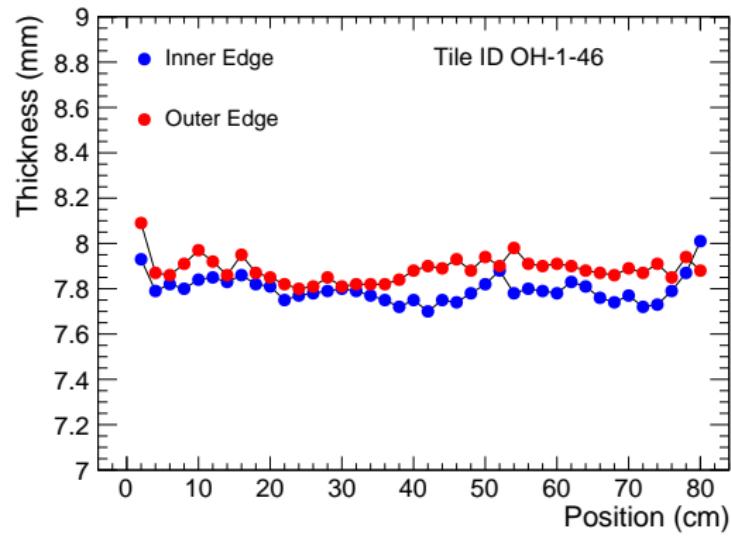
OH-1-3



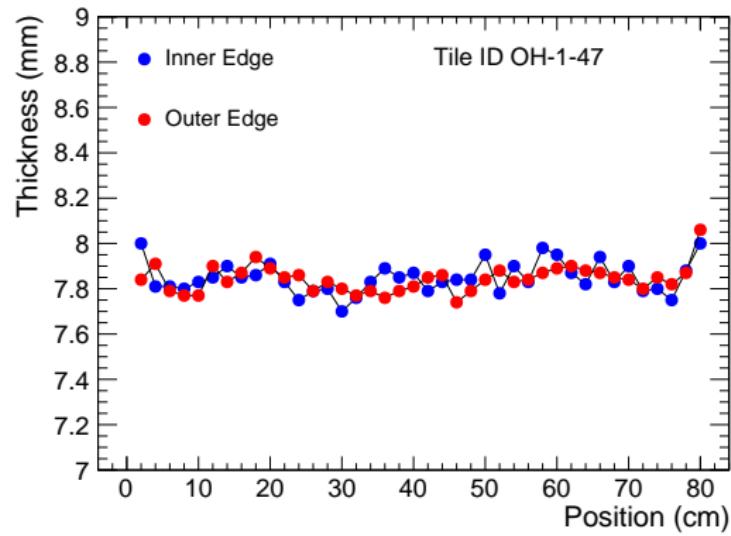
OH-2-6



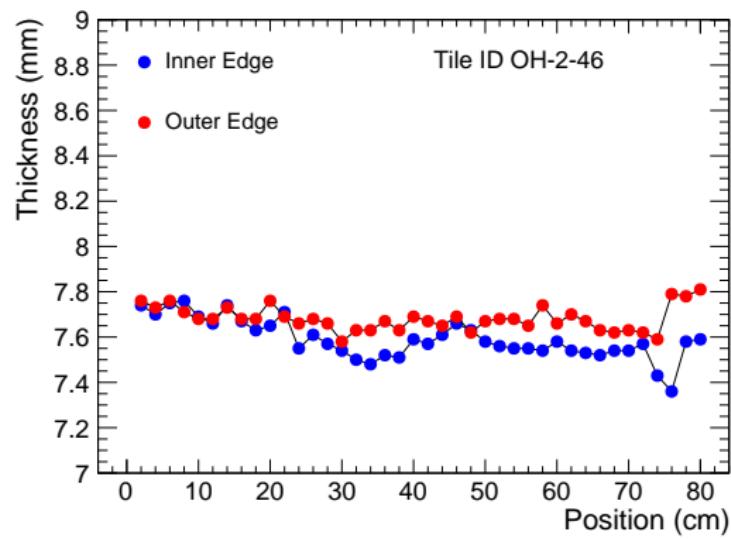
OH-1-46



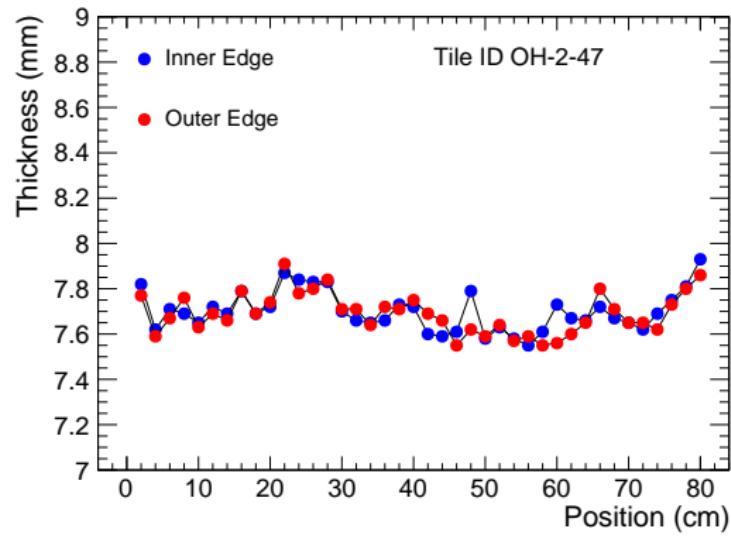
OH-1-47



OH-2-46

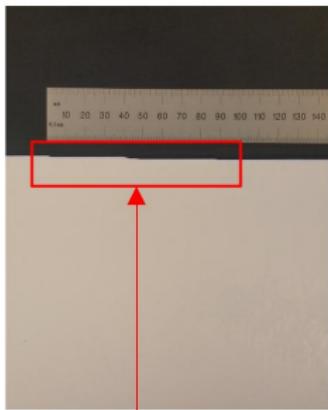


OH-2-47



Additional inspections

OH-2-6 Visual Inspection



Large steps along the straight edge



Another fill?

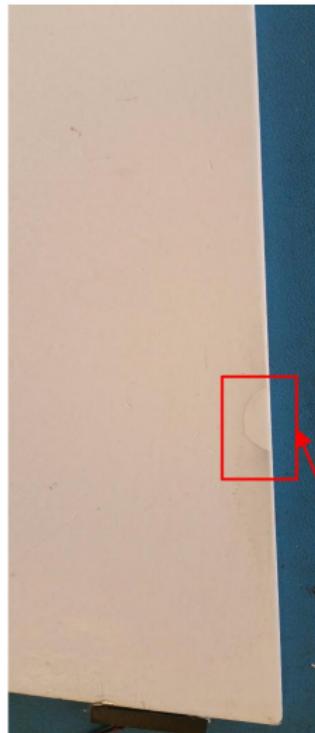
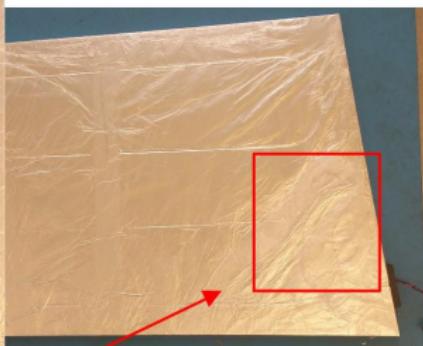


Bunched Wrapping

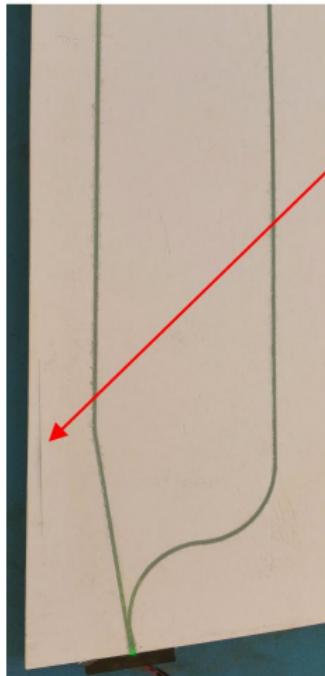
OH-2-47 Notes and Pictures



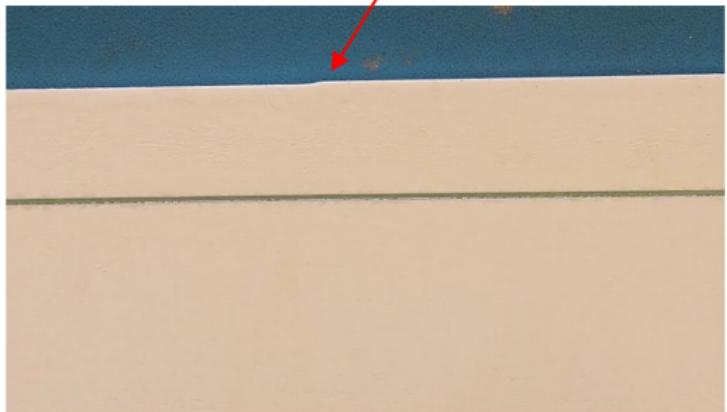
Wrapping bunched up



OH 2 47 Notes and Pics

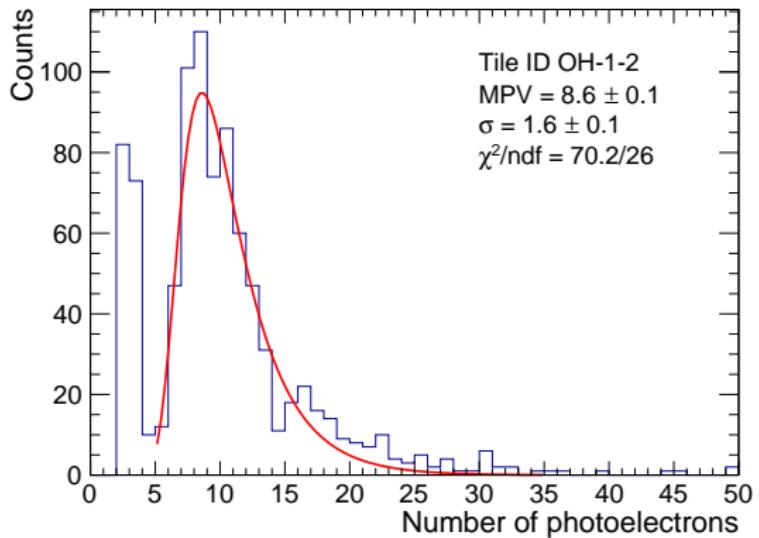


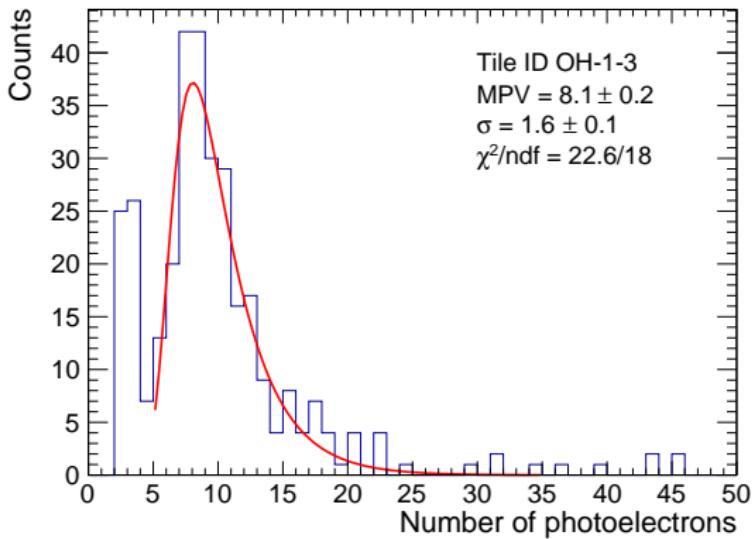
Multiple lines where
the diffusive coating
is notably thinner

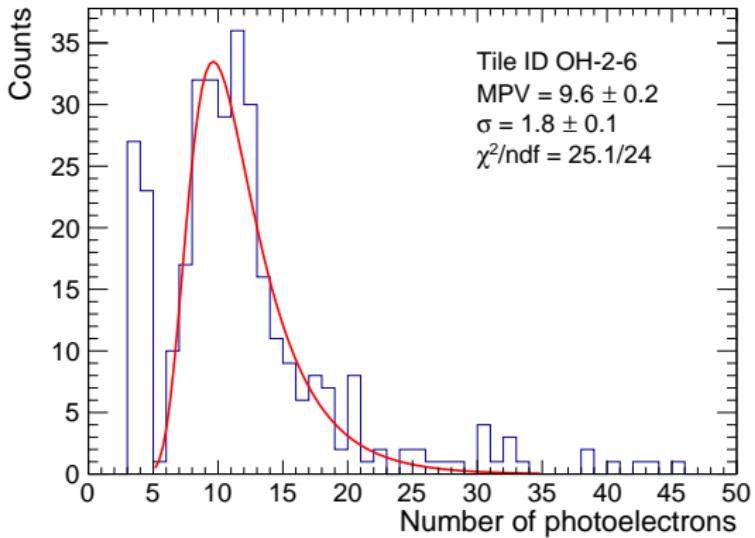


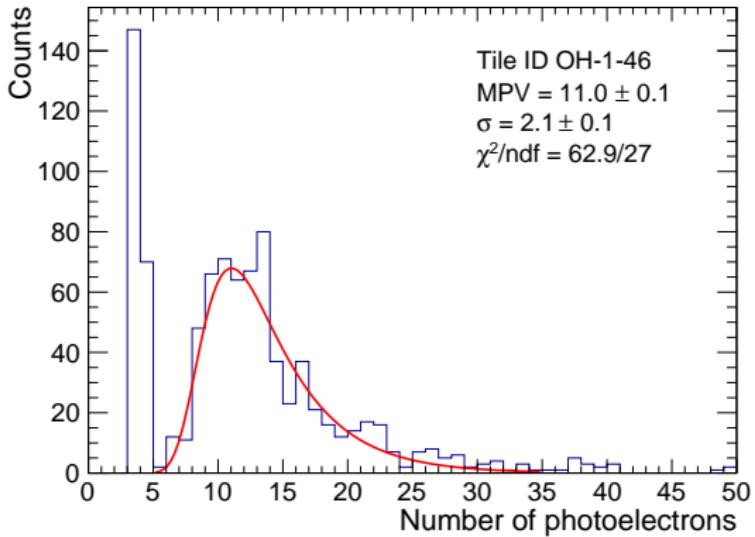
Noticeable rapid change in
thickness along one edge

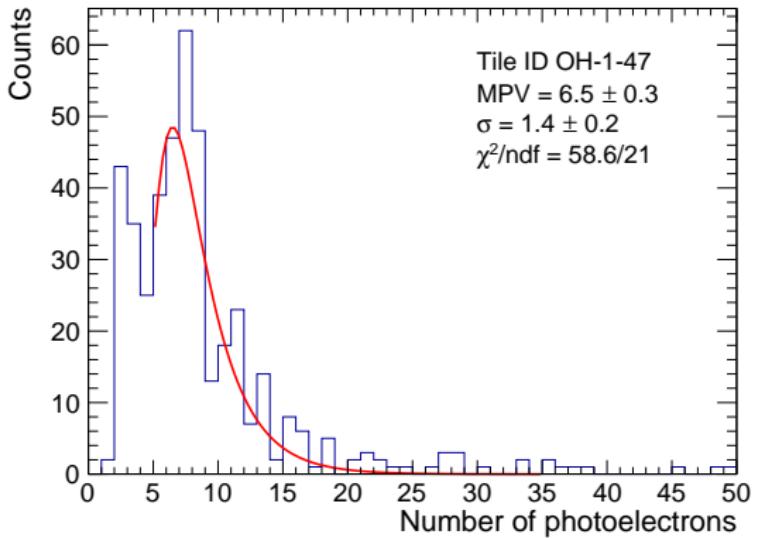
Cosmics

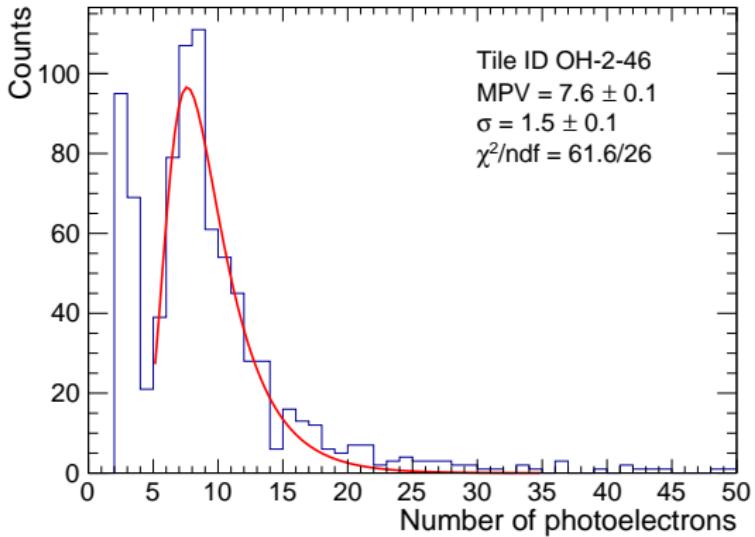


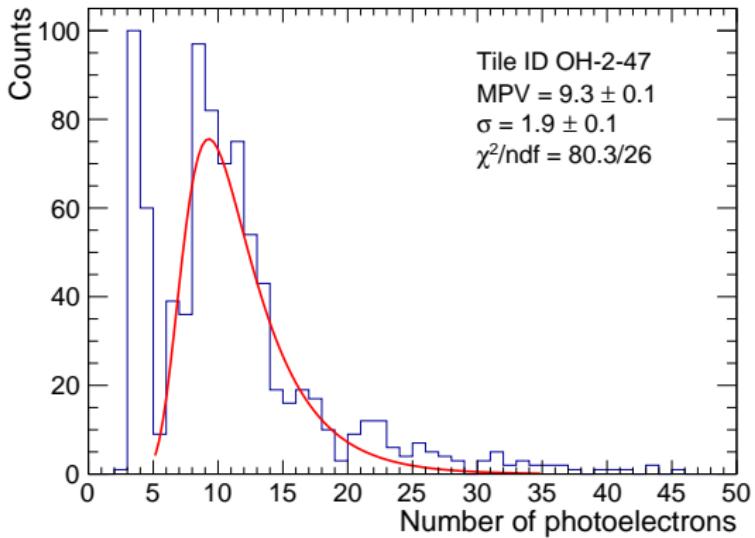




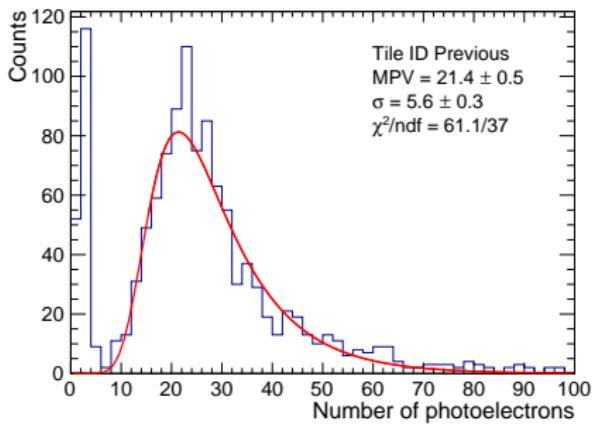
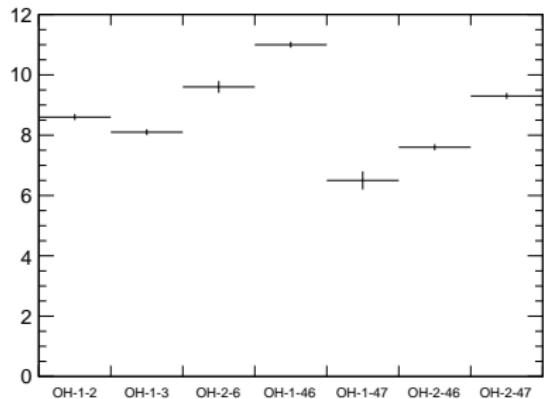






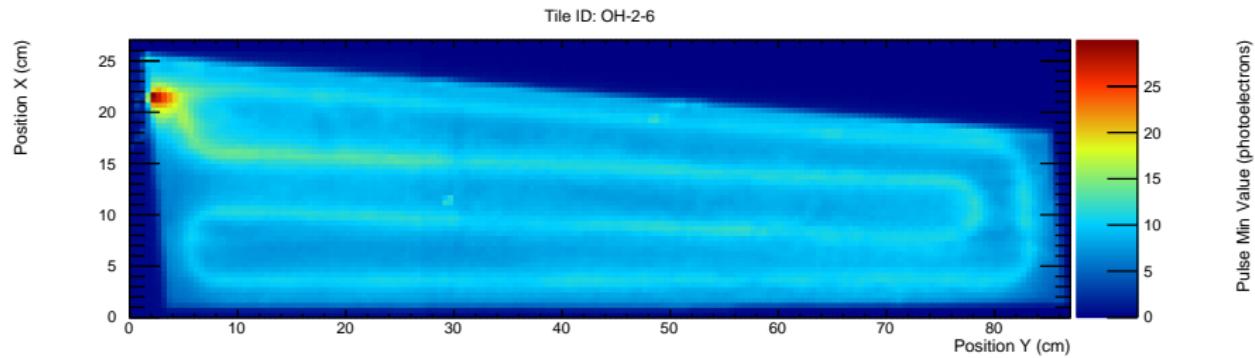


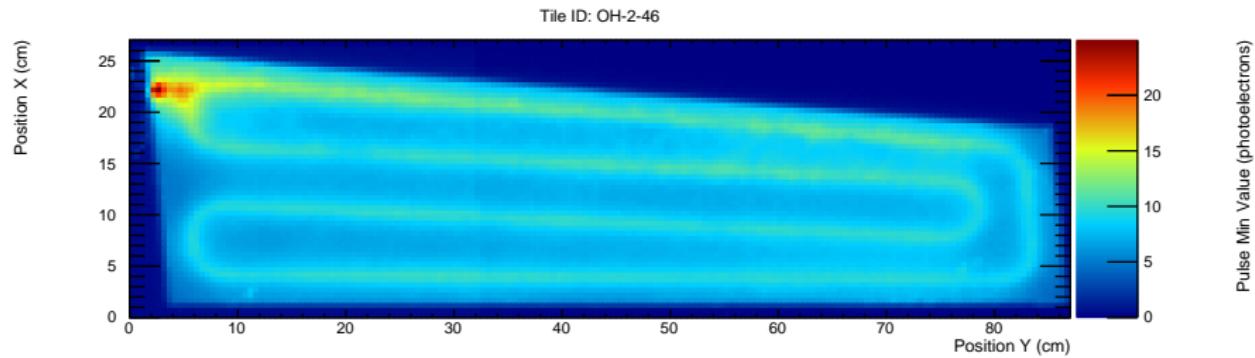
Cosmics Summary

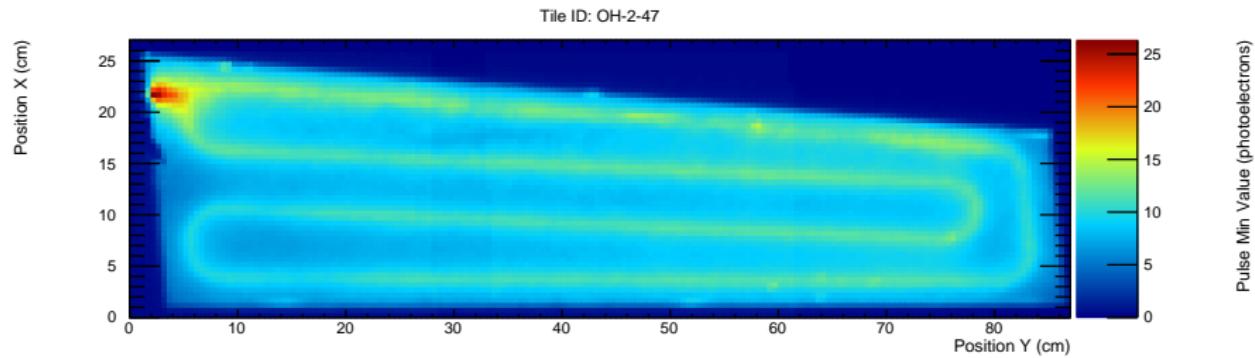


The tiles have statistically significant differences
All are much lower than our previous Outer HCal Tile test (see fig on right)

LED scans







LED Summary

- LED scans show there are no structural issues
- The average LED light output reasonably matches the MPV from the cosmics:

Tile ID	LED average	Cosmics MPV	Ratio
OH-2-6	7.63	9.6	1.25
OH-2-46	6.97	7.6	1.10
OH-2-47	7.67	9.3	1.21

- The lack of structural issues rules that out as an explanation for the lower light yield from cosmics